

We claim:

1. A rotary profile dressing tool having a rigid, disc-shaped core and an abrasive rim around at least one surface of the periphery of the core, the core and the abrasive rim being oriented in a direction orthogonal to the axis of rotation of the tool, wherein the abrasive rim comprises an abrasive component bonded to the core by means of an active braze, and the abrasive component is selected from the group consisting of diamond grains arranged in a single layer and diamond film inserts, and combinations thereof.
2. The rotary dressing tool of claim 1, wherein the abrasive rim further comprises a backing element upon which the abrasive component is brazed.
3. The dressing tool of claim 1, wherein the rigid core consists of a material selected from the group consisting of steel, tool steel, tungsten carbide, iron and cobalt, and reinforced composites thereof, and combinations thereof.
4. The dressing tool of claim 1, wherein the active braze is a bronze braze containing an effective amount of titanium to react with the abrasive component.
5. The dressing tool of claim 4, wherein the active braze comprises 55 to 79 wt% copper, 15 to 25 wt% tin and 6 to 20 wt % titanium.
6. The dressing tool of claim 1, wherein the abrasive component is diamond grains and the diamond grains have an average diameter of 0.15 to 2.0 mm.
7. The dressing tool of claim 6, wherein the abrasive rim has a tip radius equal to about one-half of the average diameter of the diamond grains.
8. The dressing tool of claim 2, wherein the core and the backing element are of a unitary construction.
9. The dressing tool of claim 1, wherein the active braze comprises 60 to 92.5 wt% nickel, 5 to 10 wt% chromium, 1.0 to 4.5 wt% boron, 1.0 to 8.0 wt % silicon and 0.5 to 5.0 wt % iron.
10. The dressing tool of claim 9, wherein the active braze further comprises 0.1 to 10 wt % tin.
11. A rotary profile dressing tool having a rigid, disc-shaped core and an abrasive rim around at least one surface of the periphery of the core, the core and the abrasive rim being oriented in a direction orthogonal to the axis of rotation of the tool, wherein the abrasive rim comprises a plurality of abrasive inserts mechanically fastened to the

periphery of the core¹¹, and the abrasive inserts comprise an abrasive component bonded to a backing element¹² by means of an active braze¹³, and the abrasive component is selected from the group consisting of diamond grains arranged in a single layer and diamond film inserts, and combinations thereof.

- 5 12. The rotary profile dressing tool of claim 11, wherein the abrasive inserts are bolted¹⁴ to the core¹⁵.

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